

BROOKHAVEN NATIONAL LABORATORY Safety & Health Services Division INDUSTRIAL HYGIENE GROUP Standard Operating Procedure: Program Procedure	NUMBER IH93175
	REVISION Final rev0
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1.0 Purpose & Scope

This document describes the function of the BNL SHSD IH Group *Laser Safety Program Administrator (Laser Safety Officer [LSO])*. The goal of the procedure is to provide a defined set of expectations to ensure high quality personnel performance from the person in this role.. Under the provisions of this procedure, the LSO is guided in the expectations of the role, and the IH Group Leader receives the information to track program status to measure the progress towards the development and maintenance of outstanding IH programs.

This procedure provides direction on the:

- R2A2 (responsibilities and duties) of the *Laser Safety Officer*, and the
- Structure for the periodic reports used for program status tracking.

2.0 Responsibilities

- 2.1 The IH Group Leader identifies programs that need to have IH staff assigned to serve as *Program Administrators*. The IH Group Leader assigns a staff member to serve as the *Laser Safety Officer* (as personnel resources are available). The IH Group Leader receives weekly status reports and provides input to the LSO to redirect her/his activities,

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when appropriate, to meet the goal of developing and maintaining outstanding IH programs.

2.2 The *LSO* is responsible to:

- 2.2.1 Follow this procedure and associated IH Group SOPs in conducting the program development, program maintenance, implementation reviews, reporting, and tracking of the program status.
- 2.2.2 Complete the duties for the *Laser Safety Program Administrator* as listed *Section 6* of this procedure and in ***Attachment 9.2: R2A2 of Program Administrator***.
- 2.2.3 Report progress on the programs on a weekly basis to the IH Group Leader using a format equivalent to ***Attachment 9.1***.

3.0 Definitions

- 3.1 ***Program Administrator***: A person assigned by the IH Group Leader to plan, organize, lead, and document the development and maintenance of an IH Laser program.

4.0 Prerequisites

- 4.1 *LSOs* must have Subject Matter Expert knowledge of the Laser Program they administer, familiarity with BNL organizations, and familiarity with BNL facilities.
- 4.2 The *LSO's R2A2* and *Performance Appraisal Goal Planning form* must be updated to reflect the role's performance metrics.

5.0 Precautions

Personal Protective Equipment: The use of personal protective equipment is required as necessary when field reviews are done in locations with hazards. If it is necessary to enter areas with hazards, appropriate personal protective equipment must be obtained, qualified, and used.

6.0 Procedure

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Equipment: None

The key responsibilities and duties specific to the Laser Safety Officer are listed in ***Attachment 9.2: R2A2 for Laser Safety Program Administrator*** and are described below:

- 6.1 **Managing the SBMS IH Subject Area:** The LSO serves as the SBMS *Laser Safety Subject Area* Point of Contact (POC) and Subject Matter Expert (SME). The PA leads development teams when the *Subject Area* requires revision.
- 6.2 **On-going Regulatory Driver Review:** The *LSO* researches current regulatory drivers from on-line databases and regulatory sites, maintains copies of the current applicable regulations and consensus documents, and retains historical (rescinded or revised) regulatory drivers and consensus documents.
- 6.3 **Annual Written Program Review:** The *LSO* reviews the BNL written program for compliance with applicable regulatory driver(s) and determines if BNL written program (i.e. SBMS Subject Area, SOPS, etc.) contain all needed elements and comply with the regulatory driver. The LSO follows applicable sections of IH50510 *Conducting an IH Self Assessment* when performing this assessment.
- 6.4 **Annual Service Delivery Review:** The LSO reviews service providers who administer the BNL program to ensure compliance with applicable regulatory driver(s). Elements to be reviewed may include medical surveillance/approval, training, protective equipment specification and issuance, hazard assessments, exposure monitoring, etc. The LSO follows the applicable sections of IH50510 *Conducting an IH Self Assessment* in conducting this assessment.
- 6.5 **Line Implementation Field Review:** The *LSO* arranges for and conducts field reviews/inspections of line organizations operations at the prescribed frequency listed in ***Attachment 9.2: R2A2 for Program Administrators***.
- 6.6 **Inventory of hazards, users, sources, and/or locations:** When applicable, the LSO prompts line organizations for information to maintain evergreen inventories for the Laser Safety Program. ***Attachment 9.2: R2A2 for Program Administrators*** lists the inventories to be maintained for each Program.

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- 6.7 **Case Management:** The *LSO* serves as the IH Group's Point of Contact on accident investigation, incident report, OMC cases, etc. When cases are opened, the PA leads investigations and document the status in the weekly reports to the IH Group Leader as well as other reporting mechanisms associated with the incident investigation protocol. The *LSO* orchestrates sampling efforts necessary for the characterization of the incident or condition.
- 6.8 **Qualification of Practitioners:** The *LSO* develops appropriate internal control documentation (SOPs) to ensure uniform implementation of service delivery by the IH Group. The *LSO* develops and delivers training and qualification to IH Group service providers. The *LSO* maintains records of the qualification criteria and the persons meeting the qualification.
- 6.9 **Annual Status of the Program Report:** The *LSO* prepares prepares *Program Status report (or Self-Assessment Report)* per *IH50510* and *IH50520*.
- 6.10 **Corrective Action Plan:** When the *Annual Status Report* or *Self-Assessment* has identified needed actions the *LSO* prepares a *Corrective Action Plan* that addresses deficiencies or gaps that need correction as per *IH50510* and *IH50520*.

7.0 Implementation and Training

- 7.1 **Qualification Criteria:** Only individuals who have demonstrated knowledge of this procedure and knowledge of the Laser Safety Program, to the satisfaction of the IH Group Leader, will be qualified to perform in the role of *LSO*.
- Training in the Laser Safety Program from internal or external sources may be used to obtain SME level knowledge or
 - The IH Group Leader may deem an individual appropriately qualified based on job experience.
 - Qualification is to be documented on at least a three year cycle.
- 7.2 **Certification as an SME:** When *certification* by a third party is available and deemed appropriate by the IH Group Leader, the PA should:
- Attain such certification if appropriately qualified or
 - Establish a career development goal to attain the required credentials to attain certification

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8.0 References

None

9.0 Attachments

- 9.1 Attachment 9.1: Sample of Weekly Activity Status Report
- 9.2 Attachment 9.2: R2A2 for Laser Safety Program Administrator
- 9.3 IH Group LSO *Qualification Form*

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10.0 Documentation

Document Development and Revision Control Tracking		
Prepared By: <i>(signature and date on file)</i> C. Weilandics 11/02/04 Certified Industrial Hygienist	Reviewed By / Date: <i>(signature/date on file)</i> R. Selvey 07/06/05 Certified Industrial Hygienist	Approved By / Date: <i>(signature/date on file)</i> R. Selvey 07/14/05 Industrial Hygienist Group Leader
ESH Coordinator/ Date: <i>none</i>	Work Coordinator/ Date: <i>none</i>	SHSD Manager / Date <i>none</i>
QA Representative / Date: <i>none</i>	Training Coordinator / Date: <i>none</i>	Filing Code: IH52.05
Facility Support Rep. / Date: <i>none</i>	Environ. Compliance Rep. / Date: <i>none</i>	Effective Date: 07/14/05
ISM Review - Hazard Categorization <input type="checkbox"/> High <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Low/Skill of the craft	Validation: <input type="checkbox"/> Formal Walkthrough <input checked="" type="checkbox"/> Desk Top Review <input type="checkbox"/> SME Review Name / Date:	IMPLEMENTATION: Training Completed: n/a Procedure posted on Web: 07/13/05 Hard Copy files updated: 07/13/05

Revision Log		
Purpose: <input type="checkbox"/> Temporary Change <input type="checkbox"/> Change in Scope <input type="checkbox"/> Periodic review <input type="checkbox"/> Clarify/enhance procedural controls Changed resulting from: <input type="checkbox"/> Environmental impacts <input type="checkbox"/> Federal, State and/or Local requirements <input type="checkbox"/> Corrective/preventive actions to non-conformances <input type="checkbox"/> none of the above Section/page and Description of change:		
<i>(signature/date on file)</i> SME Reviewer/Date:	Reviewer/Date:	Reviewer/Date:
Purpose: <input type="checkbox"/> Temporary Change <input type="checkbox"/> Change in Scope <input type="checkbox"/> Periodic review <input type="checkbox"/> Clarify/enhance procedural controls Changed resulting from: <input type="checkbox"/> Environmental impacts <input type="checkbox"/> Federal, State and/or Local requirements <input type="checkbox"/> Corrective/preventive actions to non-conformances <input type="checkbox"/> none of the above Section/page and Description of change:		
<i>(signature/date on file)</i> SME Reviewer/Date:	Reviewer/Date:	Reviewer/Date:

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Attachment 9.1

Weekly Laser Safety Officer Activity Status Report

Report By:

Week Ending: _____

Action Item	Action this week by IHG
Closure of LSO Assigned Action Items from pervious Corrective Action Plans	
Laser locations and operations Field inspected	
Annual review of line organization SOPs, ESRs & Work Permits	
Training Qualification of users verified	
OMC medical approval of users reviewed	
Work on Inventory of Laser operations (Class 3a or higher)	
Work on Inventory of Laser Users (Class 3a or higher)	
Consultation to users on laser usage	
New Level laser equipment authorization startup	
Critique off-normal occurrences	
Service Provider Review- (such as OMC medical approval)	

Sample

The only official copy is on-line at the SHSD IH Group website.
Before using a printed copy, verify that it is current by checking the document issue date on the website.

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Action Item	Action this week by IHG
Subject Area Review and/or improvement team work	
Training classes audited and/or revision work	
Laser Safety Committee	
Work on annual Self Assessment of BNL Program (final approved report due 3/31/04)	
Prepare Quarterly scorecard to system participants	
Annual Program Status Report- (final approved version due 9/30/03)	
Other non LSO activities accounting for 2 hrs or more	
Vacation/holiday/Illness	

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Attachment 9.2

R2A2 for Program Administrators

<i>Role: Laser Safety Officer</i>
<i>Responsibilities:</i> <ul style="list-style-type: none"> • Field inspect all Laser locations and operations • Verify Qualification of users • Review OMC medical approval of users • Audit training classes and initiate revision as needed • Conduct annual Self Assessment of BNL Program • Conduct annual review of the Subject Area, and lead improvement team as needed • Conduct annual review of line organization SOPs & Work Planning documentation (ESRs) • Maintain an Inventory of Lasers (Class 3a or higher) • Maintain an Inventory of Laser Users (Class 3a or higher) • Conduct new laser equipment authorization to operate at time of startup • Critique off-normal occurrences • Lead Corrective Action on program deficiencies • Provide consultation to users on laser usage • Prepare Quarterly scorecard to system participants • Prepare Weekly report to IH Group Leader • Serve on Laser Safety Committee
<i>Accountability:</i> <ul style="list-style-type: none"> • To Supervisor or any other authorized manager for quality and quantity of work, ideas on improvement opportunities, and for stewardship of assigned resources. • To fellow staff for effective communication and safe and professional conduct. • To Laboratory staff for providing expertise and guidance in assigned functional area. • To DOE for implementation of any contractual requirements in area of expertise. • To other regulating agencies which may govern aspects of functional area. • To BNL community for disseminating exposure monitoring and hazard evaluation results. • To assigned staff, for resource management and capability development, and for the quality and safety of their work environment.

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Authority:

- Exercise professional judgment and decision making in the execution of assignments.
- Make recommendations on Laboratory policies and procedures.
- Provide guidance to Laboratory managers and staff.
- Act, as necessary, to ensure safe and effective operations.
- Seek supervisory feedback on own performance.
- Identify training, information, equipment and facility needs to perform work.
- Cease work activity and/or Issue a Stop Work Order, if an imminent ES&H danger exists.
- Use available Laboratory programs to address concerns and employment issues.
- Improve management system operations.
- Take required action to complete technical assignments.
- Sign off on review of projects and plans.
- Act to ensure safe and effective operations.

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Attachment 9.3

BNL IH Group LASER Safety Program

LSO Qualification Record

(see next page)

Laser Safety Officer Qualification Certificate



Candidate's Name (Print):	BNL#
Qualified By:	Date of Qualification

I accept the responsibility for performing the tasks as demonstrated within this JPM and the corresponding SOP.

Candidate Signature:	Date:
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I certify the candidate has satisfactorily performed each of the steps listed below and is capable of performing the task unsupervised. (3 year re-qualification cycle)

Evaluator Signature:	Date:
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Formal Education (one or more of the following required)

- BS or MS degree course in Science, Engineering, IH (Semester/Quarter duration)
- Vendor or University based Short Course in *Lasers* (3 day duration)
- AIHA Professional Development Course or other organization concentrated on *Laser Safety*
- Certified as Laser Safety Officer

Formal Training Title: Provider:	Date of Class/Program
Formal Training Title: Provider:	Date of Class/Program

Candidate maintains JTA HP-93 Qualifications as per BTMS notifications for:

JTA HP-93	Biohazard Technical Consultant	Retraining
TQ-Laser	Web CBT: <i>Laser Safety</i>	AS BTMS SPECIFIED
TQ-OSH-105A	Web CBT: Basic Electric Safety	AS BTMS SPECIFIED
IH-IHP-939200	Laser Inspections	3 yr

Performance Measures for Technical Consultant

Topic	Criteria	Qualification Status		
		Unsatisfactory	Recovered	Satisfactory
Hazard Analysis	Demonstrates knowledge of appropriate risks of Lasers			
Sampling Equipment	Shows where equipment needed for the analysis is located, how to properly sign it out, and how to use it.			
Assessment Protocol	Understands the assessment logic necessary to appropriately select sampling locations to accurately measure worker exposure potential.			
Record forms	Shows where forms to record assessment results are located and how to correctly and completely fill them out.			
Corrective Actions	Demonstrates knowledge of techniques that can improve or eliminate hazards.			
Analysis of data	Shows how to perform the data analysis to assess potential exposure to the worker.			

Additional Requirements for Program Administrator

Program Assessment	Has adequate knowledge of the principles of evaluating the IHG program, the site's program, and line implementation of the program.			
Requirements Management	Demonstrates knowledge in tracking regulatory requirements and consensus standards on Lasers.			
Site Program Development	Demonstrates the ability to address gaps or deficiencies in the SBMS Subject Area documentation and initiate corrective actions.			
IH Group Program Development	Demonstrates the ability to address gaps or deficiencies in the IH Group SOPs and initiate corrective actions.			